Motion and Sound

3-5 The student will demonstrate an understanding of how motion and sound are affected by a push and pull on an object and the vibration of an object (Physical Science)

3.5.6 Compare pitch and volume of different sounds.
Taxonomy level: 2.6-B Understand Conceptual Knowledge

Previous/Future knowledge: Students have not been introduced to the concepts of pitch and volume of different sounds in previous grades. They will further develop these concepts in 8th grade (8-6.3) and also in high school Physical Science (PS-7.7).

It is essential for students to know that different sounds can have different pitches and volumes as follows:

Pitch
- *Pitch* of a sound is how high or low it is.
- For example, a man's voice has a lower pitch than a woman's voice, or a bird song has a higher pitch than the rumble of a heavy truck.
- Changing the length of the vibrating object can change pitch.
- A long string or wire will have a lower pitch than a short string or wire.

Volume
- *Volume* is the loudness or softness of a sound.
- For example, the sound from a person yelling is a louder volume than the sound from a person whispering even though the pitch is the same.
- It takes more force to produce loud sounds than soft sounds.

It is not essential for students to know how frequencies, wavelengths, or amplitude compare to the pitch and volume of sound waves.

Assessment Guidelines:
The objective of this indicator is to *compare* the pitch and volume of different sounds; therefore, the primary focus of assessment should be to detect similarities and differences between common sounds to see if they have higher or lower pitch or louder or softer volume. However, appropriate assessments should also require students to *exemplify* sounds with higher or lower pitch or louder or softer volume.